

DETAILED ACTION

1. This Office action is in response to the After-Final Amendment filed on August 16, 2010.

Examiner's Amendment

2. An Examiner's Amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Jerald L. Meyer (Reg. No. 41,194) on August 19, 2010.

3. The application has been amended as follows:

IN THE CLAIMS

- (a) **Claim 14, lines 20-21:** "the first and second diffracted beams" has been changed to --first and second diffracted beams--.
- (b) **Claim 14, line 23:** "the receive third and fourth diffracted beams" has been changed to --receive third and fourth diffracted beams--.
- (c) **Claim 14, line 37:** "a recording or reproducing object" has been changed to --the recording or reproducing object--.
- (d) **Claim 14, line 43:** "the signal" has been changed to --a signal--.
- (e) **Claim 14, line 47:** "the signal" has been changed to --a signal--.
- (f) **Claim 14, line 48:** "the plurality first light receiving regions" has been changed to --the plurality of first light receiving regions--.

Examiner's Comment

4. The amendment to the claims filed on 16 August 2010 does not comply with 37 CFR § 1.121(c)(2) because it does not show “markings to indicate the changes that have been made relative to the immediate prior version of the claims” as detailed below:

(a) The phrase of “the receive third and fourth diffracted beams” (**claim 14, lines 23-24 of amended claim-set filed on 16 August 2010**) is different from the phrase of “receive the third and fourth diffracted beams” (**claim 14, lines 23-24 of prior claim-set filed on 4 May 2010**). In other words, the word “the” is misplaced in the 16 August 2010 claim-set. Therefore, under MPEP § 714.II.E and by the Examiner’s Amendment which appears above to correct an issue of insufficient antecedent basis for the terms “third and fourth diffracted beams,” the word “the” has been deleted by Examiner’s Amendment in this action so that the claims are compliant with 37 CFR § 1.121(c)(2) and so that the issue of there being insufficient antecedent basis for the term “third and fourth diffracted beams” is resolved.

(b) The phrase of “the plurality first light receiving regions” (**claim 14, line 48 of amended claim-set filed on 16 August 2010**) is different from the phrase of “the plurality of first light receiving regions” (**claim 14, line 49 of prior claim-set filed on 4 May 2010**). In other words, the word “of” is missing from the 16 August 2010 claim-set. Therefore, under MPEP § 714.II.E, the word “of” has been added back into the claims by Examiner’s Amendment in this action so that the claims are compliant with 37 CFR § 1.121(c)(2).

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Reasons for Allowance

5. Claims 14, 15, 17, and 20-25 are allowed over the prior art of record.

6. The following is an examiner's statement of reasons for allowance:

(a) **In regard to claim 14**, the prior art of record alone or in combination fails to teach or suggest:

an optical device for an optical pickup apparatus for recording or reproducing information with respect to a first information recording medium having a plurality of recording layers and a second information recording medium having a single recording layer, the optical device comprising:

a substrate;

a hologram element to diffract

a first main beam of a first wavelength that is reflected by a first one of the plurality of recording layers that is a recording or reproducing object in the plurality of recording layers of the first information recording medium, and

first and second sub-beams of the first wavelength that are reflected by the first one of the plurality of recording layers of the first information recording medium so as to reach different positions, respectively, during recording or reproducing information to or from the first information recording medium, and

a second main beam of a second wavelength that is reflected by the single recording layer of the second information recording medium, and

third and fourth sub-beams of the second wavelength that are reflected by the single recording layer of the second information recording medium so as to reach different positions, respectively, during recording or reproducing information to or from the second information recording medium;

a plurality of first light receiving regions arranged on the substrate to receive first and second diffracted beams that are diffracted from the first and second sub-beams respectively by the hologram element;

a plurality of second light receiving regions arranged on the substrate to receive third and fourth diffracted beams that are diffracted from the third and fourth sub-beams respectively by the hologram element; and

an operation unit, wherein:

the wavelength of an incident beam to the hologram element is one wavelength of either the first or second wavelengths,

the operation unit performs a subtraction operation between a signal that is photoelectrically converted from the light received by the plurality of first light receiving regions that receives the first and second diffracted beams and unnecessary light reflected by one or more of the plurality of first information medium recording layers other than the recording layer that is a recording or reproducing object and a signal that is photoelectrically converted from the light

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received by the plurality of second light receiving regions that receive the unnecessary light scattering over the substrate including the plurality of first and second light receiving regions reflected by one or more of the plurality of first information medium recording layers other than the recording layer that is the recording or reproducing object.

the operation unit removes a component representative of the unnecessary light from the signal that is photoelectrically converted from the light received by the plurality of first light receiving regions, and

the operation unit outputs a detection signal representative of the first light wavelength, when the one wavelength is the first wavelength, and wherein the operation unit:

performs a subtraction operation between a signal that is photoelectrically converted from the light received by the plurality of second light receiving regions that receive the third and fourth diffracted beams and unnecessary light reflected by the single recording layer of the second information recording medium and a signal that is photoelectrically converted from the light received by the plurality of first light receiving regions that receive unnecessary light scattering over the substrate including the plurality of first and second light receiving regions reflected by the single recording layer of the second information recording medium,

removes a component representative of the unnecessary light from the signal that is photoelectrically converted from the light received by the plurality of second light receiving regions, and

outputs a detection signal representative of the second light wavelength, when the one wavelength is the second wavelength.

(b) **Claims 15, 17, and 20-25** are dependent upon claim 14.

7. Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Mark L. Fischer whose telephone number is (571) 270-3549.

The examiner can normally be reached on Monday-Friday from 9:00AM to 6:30PM EST.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hoa Thi Nguyen can be reached on (571) 272-7579. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>.

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/MLF/

***/Brian E. Miller/
Primary Examiner, Art Unit 2627***